



Water Infrastructure Protection

The Water Infrastructure Protection Division (WIPD), in partnership with the Office of Water's Water Security Division, conducts research and provides reports on ways to protect the nation's water infrastructure.

WIPD's Mission

EPA's traditional mission of "protecting human health and the environment" has been broadened to include responsibility for protecting the United States against the environmental and health consequences of terrorist acts.

WIPD research addresses drinking water supply, water treatment, finished water storage, and drinking water distribution infrastructure. It also addresses wastewater treatment and collection infrastructure, including sanitary and storm sewers and combined sanitary/storm sewer systems, wastewater treatment, and treated wastewater discharges.

Through intensive discussions with water sector stakeholders, seven areas of research needs were defined:

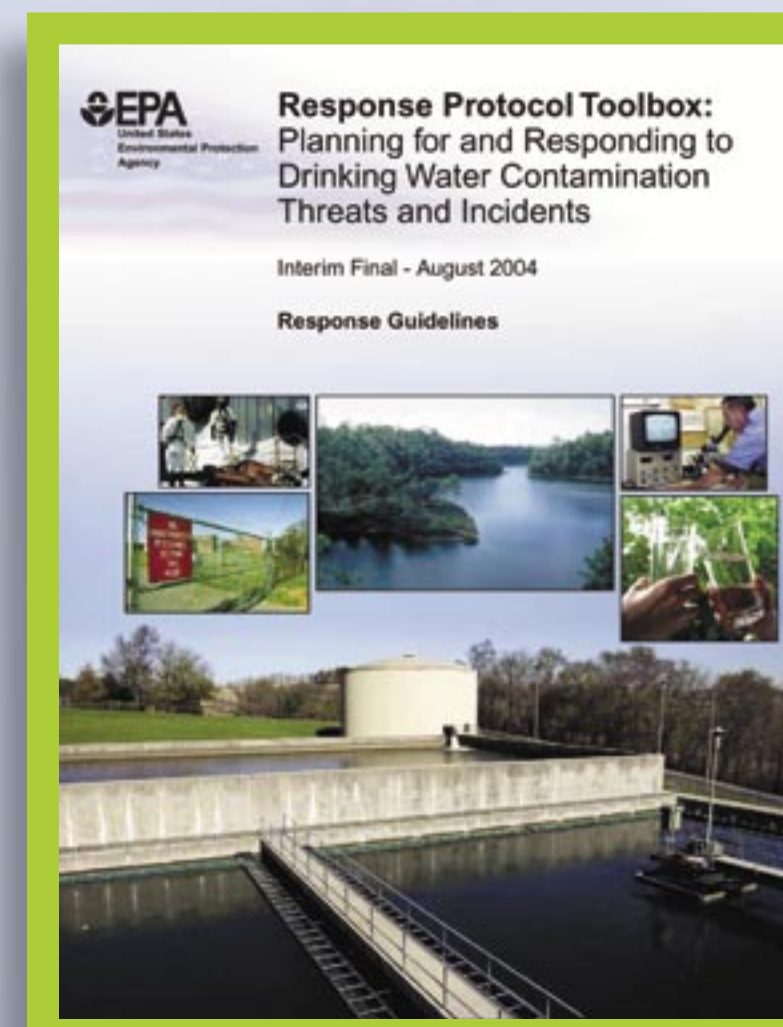
1. Protecting physical and cyber infrastructure
2. Identifying drinking water contaminants
3. Improving analytical methodologies and monitoring systems for drinking water
4. Containing, treating, decontaminating, and disposing of contaminated water and materials
5. Planning for contingencies and addressing infrastructure interdependencies
6. Targeting impacts on human health and informing the public about risks
7. Protecting wastewater treatment and collection systems

To ensure that all avenues were explored in identifying water security needs and potential projects, several EPA offices and a number of stakeholders collaborated in the development of WIPD's research plan, entitled "The Water Security Research and Technical Support Action Plan" (available at www.epa.gov/nhsrhc). These stakeholders included drinking water and wastewater industry professionals, government agencies, homeland security experts, academics, and consultants.

More than 100 projects have been initiated to address the needs listed in the Action Plan. Various EPA offices, stakeholders, and federal organizations are leading different projects and assisting in the implementation of the Action Plan. Information and products resulting from these projects will be widely disseminated to interested stakeholder groups through documents; databases; Web sites; scientific and technical journals; and symposia, workshops, and conferences.

Available Products

- Threat Scenarios for Water Systems Report (Classified)
- Methodologies and Tools for Conducting Vulnerability Assessments
- Risk Assessment Methodology for Water Utilities (RAM-WSM)
- Vulnerability Self Assessment Tool (VSATTM) — Version 3.1
- Interim Guidance and Voluntary Design Standards to Improve Security at Drinking Water and Wastewater and Stormwater Facilities



- Response Protocol Toolbox
- Security Product Guides
- Environmental Laboratory Compendium
- Inactivation/Removal Capabilities of Treatment and Disinfection Technologies for Biological Contaminants
- Effectiveness of Chlorination on Vegetative and Spore Forms of Bacterial Bioterrorist Agents
- Environmental Technology Verification (ETV) Program, Water Supply, Point of Use, and Wastewater Treatment
- Wastewater Baseline Threat Document



Future Products

- Guidance and Voluntary Design Standards to Improve Security at Drinking Water and Wastewater and Stormwater Facilities
- Guidance on Protecting Drinking Water and Wastewater Facilities from Blasts
- Guidance for Water and Wastewater Utility Computer Systems
- Water Contaminant Information Tool (WCIT)
- Water Contaminant Surrogates and Simulants Methods, Guidance, and Training
- Development of Ultrafiltration Devices and a Water Filtering Protocol
- Sampling and Analytical Methods and Interim Protocol for Detecting Biological Contaminants in Water
- Early Warning System Technologies and Techniques to Monitor and Evaluate Drinking Water Quality: State-of-the-Art Review
- The Distribution Systems Handbook
- Threat Ensemble Vulnerability Assessment (TEVA) Modeling Tools
- Resource Guide on the Aquatic Fate of Biological, Chemical, and Radiological Contaminants
- Research on the Inactivation of Biological Agents in Water
- Drinking Water Treatability Database
- Resource Document and Guidance for Decontaminating Post-Service Connections
- Handbook for Decontaminating Piping and Equipment
- Disposal Alternatives Tool
- Guidance for Drinking Water and Wastewater Utilities to Minimize Outages Due to Interdependencies with Other Critical Sectors
- Guide on Ensuring Continued Delivery of Safe Water
- Information on Current Practices for Controlling Access to Wastewater Collection and Treatment Systems

